

In the Abstract

Please replace the abstract with the attached.

In the Claims

Please rewrite the indicated claims to read as follows:

1. An in-line injection molding machine for low-melting point metallic material in which the injection molding machine is constituted by:

an in-line injection mechanism having a tip portion, a melting cylinder, and a rear-end portion;

said tip portion having a weighing chamber with a required length communicating with a nozzle member at a first end and with said melting cylinder at a second end;

said melting cylinder having a supply port on an upper side and an agitating and injection means disposed within, said melting cylinder provided obliquely in a manner that a tip portion end is directed in a downward direction such that a molten metal in said melting cylinder flows down by self-weight to be stored in the tip portion, said agitating and injection means mounted to rotate or advance or retreat freely, wherein said agitating and injection means is constituted by an agitating member in which a plurality of agitating wings are formed intermittently about an outer periphery of a tip portion of a hollow shaft that extends a length of said melting cylinder, said agitating wings with an external diameter approximately equal to an inner diameter of the melting cylinder, said hollow shaft having a through-hole at a

central position and an injection rod having an injection plunger attached unitarily to a tip of said injection rod inserted into said through-hole, said injection plunger freely slidable in a central portion of the agitating member and extendable beyond the tip of the agitating member so as to insert into said weighing chamber freely;

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said rear-end portion aligned with, and spaced behind, an upward end of said melting cylinder including a device driving said agitating and injection means; and

a mold-clamping mechanism disposed external to and downward from the nozzle/member of said tip portion.

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4. The in-line injection molding machine for low-melting point metallic material according to claim 1, further comprising:

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a base supporting said mold-clamping mechanism;

a pedestal on said base spaced apart from said mold-clamping mechanism;

a frame installed on said pedestal having an inclined upper surface incorporating a pair of support shafts at a lower end of said upper surface;

a hydraulic cylinder, spaced a required interval from said upward end of said melting cylinder, said hydraulic cylinder oriented in a downward direction, an upper end of said hydraulic cylinder at a tip portion of said frame; and

supporting legs, projecting from a lower side of said hydraulic cylinder said supporting legs inserted respectively in said support shafts; wherein a nozzle touch device is formed when said injection rod is unitarily coupled by a tie bar across said interval to said hydraulic device.

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5. The in-line injection molding machine for low-melting point metallic material according to claim 1, wherein a driving device for said agitating member is constituted by an electric motor, which is provided on a side of supporting legs of the melting cylinder so as to move together with said melting cylinder.

REMARKS

Claims 1-7 were before the Office. In the Office Action of March 29, 2002, the abstract and Claims 4 and 5 were objected to, Claims 1-7 were rejected under 35 U.S.C. 112, second paragraph for an indefiniteness in Claim 1, and Claims 1-7 were rejected under 35 U.S.C. 103(a) over Bradley in view of Kono ('976) and Kono ('372). Applicants submit an amended Abstract, have edited Claims 1, 4, and 5 to overcome the objections and indefiniteness and amend claim 1, 4 and 5 to more clearly distinguish over the references.

Amended Claim 1 recites an in-line injection molding machine for low-melting point metallic material in which the injection molding machine is constituted by an in-line injection mechanism having a tip